
 PROCEEDINGS
 OF THE
 BIOLOGICAL SOCIETY OF WASHINGTON

ELSINOË STAGE OF *SPHACELOMA SACCHARI*

BY T. C. LO

*Department of Plant Pathology, College of Agriculture,
Taiwan Provincial Chung-Hsing University, Taichung,
Taiwan, China*

In their account of spotted anthracnose of sugarcane (*Saccharum officinarum* L.), in Taiwan called "white speck," Jenkins and Bitancourt (1960) showed that in Brazil, S. C. Arruda had discovered (1957) *Elsinoë* fruiting on the leaf spots, while in Taiwan, in the same year, Lo (1957) had described *Sphaceloma sacchari* as the cause of the disease. Discovery (1961) of *Elsinoë* on white speck lesions in Taiwan substantiates Jenkins and Bitancourt's implication of the new species of *Elsinoë* as the perfect stage of *S. sacchari*.

In order that the new species may have a specific name it is here described as *Elsinoë sacchari*.

***Elsinoë sacchari*, sp. nov.**

Ascomata organismi causalis pulvinata, intraepidermalia $50 \times 31.2 \mu$ in epithecio pseudoparenchymatico. Asci elliptici vel globosi, $10.3-13 \times 9.6-10.6 \mu$, in ascomatibus dispersi. Ascospores hyalinae, oblongo-ellipticae, rectae vel plus minusve curvatae, unitriseptatae, saepe quoad septa notabiliter constrictae, $8-10 \times 3.3 \mu$.

Forma imperfecta, *Sphaceloma sacchari* Lo (J. Agr. & Forest., 6: 71, pls. 1-3. 1957).

Hab.: In foliis *Saccharum officinarum* L.

Loc.: Tainan, Taiwan, China.

Typus est in foliis *Saccharum officinarum* L., cv. 'NCO:310.' Tainan, Taiwan, China, 25 Feb. 1961, T. C. Lo 22 (TPU 60-4-22). TPU numbers are accession numbers in the Taiwan Provincial Chung Hsing Univ., Coll. Agr. Herb. Likewise, BPI numbers are accession numbers in the National Fungus Collections, Crop Research Division, U. S. Department of Agriculture, Beltsville, Maryland. SPIB numbers are accession numbers in the Herb. Secção Fitopat., Instituto Biológico, São Paulo, Brazil.

Ascomata pulvinate, intraepidermal, $50 \times 31.2 \mu$, with a dark pseudoparenchymatic epithecium; asci elliptical to spherical, $10.3-12 \times 9.6-$

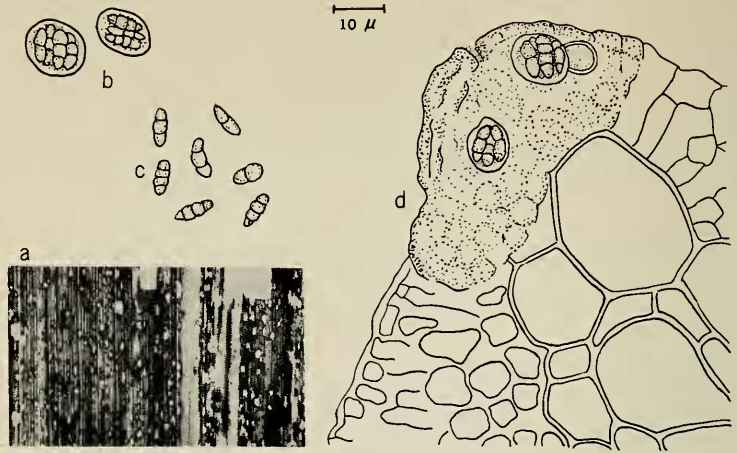


FIG. 1. *Elsinoë sacchari*. *a*, White speck lesions on the specimen from Florida, by virtue of the dark epithecium, ascomata vaguely visible particularly on the linear lesions to the right; \times ca. 3. *b*, *c*, and *d*, from the specimen from Taiwan, camera lucida drawings of two asci (*b*), several ascospores (*c*), and a cross-section through diseased leaf tissue showing an ascoma in situ (*d*).

10.6 μ , scattered in the ascomata; ascospores hyaline, oblong-elliptical, straight or more or less curved, untriseptate, often markedly constricted at the septa, 8.6–10 \times 3.3 μ .

Conidial stage, *Sphaceloma sacchari* Lo.

Pathogenic on sugarcane (*Saccharum officinarum* L., Gramineae), causing the leaf-spotting disease "white speck."

Type: On sugarcane, cv. 'NCO:310,' Tainan, Taiwan, China, 25 Feb. 1961, T. C. Lo 22 (TPU 60-4-22). Fig. 1, *b*, *c*, *d*. During the course of study of *Elsinoë sacchari* material of this collection was contributed to both BPI and SPIB.

A culture of the fungus isolated in Taiwan as *Sphaceloma sacchari* has been deposited in the Centraalbureau voor Schimmelcultures, Baarn, Netherlands, also in the American Type Culture Collection, Rockville, Maryland.

Paratypes: On sugarcane, cv. 'C. B. 38/22,' Experimental Sugarcane Station, Piracicaba, State of São Paulo, Brazil, April 1957, S. C. Arruda (TPU 61-4-31, ex BPI 91288, this, in turn, ex SPIB 9116).

On sugarcane, cv. 'F. 31-436,' U. S. Sugarcane Field Station, Canal Point, Florida, 16 Nov. 1959, E. F. Todd (TPU 61-4-32, ex BPI 91417). Fig. 1, *a*.

The several earlier published illustrations of the leaf spot are those by Lo (1957, pl. 1), Todd (1960, fig. 1), and Jenkins and Bitancourt (1960, fig. 1).

Altogether, the specimen material reported by Jenkins and Bitancourt reveals the wide, world distribution of sugarcane white speck. Additional Pacific area distribution is shown by the following specimen: Uturoa, Raiatea Island, Society Islands, 31 Jan. 1961, N. L. H. Krauss 623. Det. A. E. J., ex BPI 91438.

Elsinoë sacchari, with its earlier (1957) described imperfect stage, *Sphaceloma sacchari*, and *E. panici* Tiffany and Mathre (1961) on *Panicum virgatum* are the initial and thus far the only known gramineous Elsinoaceae.

Acknowledgments: The writer acknowledges the courtesy of Dr. C. R. Benjamin, through whose office as curator of the National Fungus Collections, Crops Research Division, U. S. Department of Agriculture, Beltsville, Maryland, was contributed the specimen material from that source herein cited. This was selected and transmitted by Dr. Anna E. Jenkins of that Division. Credit is due her, also Dr. A. A. Bitancourt, Instituto Biológico, São Paulo, Brazil, for helpful suggestions while this article was in preparation.

LITERATURE CITED

- JENKINS, A. E. AND A. A. BITANCOURT. 1960. Notas sôbre as antracnoses maculadas X-Antracnose maculada da cana de açúcar. *O Biológico*, 26: 111-113.
- LO, T. C. 1957. A new disease (White Speck Disease) of sugarcane in Taiwan. *J. Agr. and Forest.*, 6: 70-74.
- TIFFANY, L. H. AND J. H. MATHRE 1961. A new species of *Elsinoë* on *Panicum virgatum*. *Mycologia*, 53: 600-604.
- TODD, E. H. 1960. *Elsinoë* disease of sugarcane in Florida. *Plant Dis. Rept.*, 44: 153.